

**IN THE CLAIMS:**

1 1. (Currently Amended) A method for modifying data transferred from a source to a des-  
2 tination, the method comprising the steps of:  
3 reading one or more instructions, by a processor, each instruction indicating an  
4 operation to modify the data;  
5 generating, in response to the one or more instructions, one or more commands  
6 wherein each command is associated with the operation to modify the data;  
7 placing the commands in a data structure;  
8 initiating transfer of data from the source to the destination; and  
9 performing, by a device operating independently from the processor, the opera-  
10 tions associated with the commands contained in the data structure to modify the data as  
11 directed by the commands as while the data is being transferred from the source to the  
12 destination.

1 2. (Previously Presented) The method as defined in claim 1 further comprising the step  
2 of:  
3 acquiring the data from the source.

1 3. (Previously Presented) The method as defined in claim 2 further comprising the steps  
2 of:  
3 generating a bit mask associated with the acquired data; and  
4 transferring the bit mask and the acquired data to the destination.

1 4. (Previously Presented) The method as defined in claim 2 wherein the data structure  
2 comprises one or more entries wherein each entry is associated with a command and the  
3 entry contains information associated with a range of addresses and an operation code  
4 that are associated with the command.

- 1 5. (Previously Presented) The method as defined in claim 4 further comprising the step  
2 of:
- 3 searching the data structure for an entry containing information associated with a  
4 range of addresses that matches a range of addresses associated with the acquired data;  
5 if a matching entry is found, determining if an operation code contained in the  
6 matching entry indicates a delete data operation; and  
7 if so, generating a delete bit mask that represents data that is deleted in the ac-  
8 quired data and transferring the delete bit mask and the acquired data to the destination.
- 1 6. (Previously Presented) The method as defined in claim 4 comprising the steps of:
- 2 searching the data structure for an entry containing information associated with a  
3 range of addresses that matches a range of addresses associated with the acquired data;  
4 if a matching entry is found, determining if an operation code contained in a  
5 matching entry indicates an insert data operation; and if so,  
6 a) generating a leading bit mask that represents leading data contained in  
7 the acquired data,  
8 b) transferring the leading bit mask and the acquired data to the destina-  
9 tion,  
10 c) acquiring insert data,  
11 d) generating an insert data bit mask that represents the insert data,  
12 e) transferring the insert data bit mask and the insert data to the destina-  
13 tion,  
14 f) generating a lagging bit mask that represents lagging data contained in  
15 the acquired data, and  
16 g) transferring the lagging bit mask and the acquired data to the  
17 destination.

1 7. (Previously Presented) The method as defined in claim 4 wherein each entry contains  
2 a length and a source address associated with the command.

1 8. (Previously Presented) The method as defined in claim 7 comprising the step of:  
2 searching the data structure for an entry containing information associated with a  
3 range of addresses specified by the combination of the length and the source address con-  
4 tained in the entry that matches a range of addresses associated with the acquired data.

1 9. (Previously Presented) The method as defined in claim 1 wherein the data structure is  
2 a table.

1 10. (Previously Presented) The method as defined in claim 1 comprising the step of:  
2 clearing the data structure.

1 11. (Previously Presented) The method as defined in claim 1 wherein the source is a con-  
2 text memory.

1 12. (Previously Presented) The method as defined in claim 1 wherein the destination is  
2 an output buffer.

1 13. (Currently Amended) A system comprising:  
2 a context memory configured to hold data;  
3 a data structure configured to hold one or more commands;  
4 a processor configured to read one or more instructions, each instruction indicat-  
5 ing an operation to modify the data, and in response generate one or more commands to  
6 modify the data, the processor further configured to place the commands in the data  
7 structure;  
8 an output buffer; and

a data mover coupled to the context memory and the output buffer and configured to acquire the data from the context memory, modify the data as directed by the commands contained in the data structure while the data is being transferred from the context memory to the output buffer, and transfer the modified data to the output buffer.

14. (Previously Presented) The system as defined in claim 13 wherein the data structure is a table.

15. (Previously Presented) The system as defined in claim 13 wherein the data structure comprises one or more entries wherein each entry is associated with a command and the entry contains information associated with a range of addresses and an operation code that are associated with the command.

16. (Previously Presented) The system as defined in claim 15 wherein the data mover is configured to search the data structure for an entry containing information associated with a range of addresses that matches a range of addresses associated with the acquired data and if a matching entry is found, determine if the operation code contained in the matching entry indicates a delete data operation and, if so, generate a delete bit mask that represents data that is deleted in the acquired data.

17. (Previously Presented) The system as defined in claim 15 wherein the data mover is configured to search the data structure for an entry containing information associated with a range of addresses that matches a range of addresses associated with the acquired data and if a matching entry is found, determine if the operation code contained in the matching entry indicates an insert data operation and if so, (i) generate a leading bit mask that represents leading data contained in the acquired data, (ii) transfer the leading bit mask and acquired data to the destination, (iii) acquire insert data, (iv) generate an insert data bit mask that represents the insert data, (v) transfer the insert data bit mask and insert data to the destination, (vi) generate a lagging bit mask that represents lagging data con-

10 tained in the acquired data, and (vii) transfer the lagging bit mask and the acquired data to  
11 the destination.

1 18. (Previously Presented) The system as defined in claim 15 wherein each entry in the  
2 data structure contains a length and a source address associated with the command.

1 19. (Previously Presented) The system as defined in claim 18 wherein the data mover is  
2 configured to search the data structure for an entry containing information associated  
3 with a range of addresses specified by the combination of the length and the source ad-  
4 dress contained in the entry that matches a range of addresses associated with the ac-  
5 quired data.

1 20. (Previously Presented) The system as defined in claim 13 wherein the data mover is  
2 configured to generate a bit mask associated with the data and transfer the bit mask to the  
3 output buffer.

1 21. (Previously Presented) The system as defined in claim 20 wherein the output buffer  
2 comprises:

3 data steering logic configured to use the bit mask to identify valid data contained  
4 in the transferred data;

5 a working register coupled to the data steering logic and configured to hold the  
6 valid data transferred from the data steering logic; and

7 an output queue coupled to the working register and configured to hold the valid  
8 data transferred from the working register.

1 22. (Currently Amended) An apparatus for modifying data transferred from a source to a  
2 destination, the apparatus comprising:

3 means for reading one or more instructions, each instruction indicating an opera-  
4 tion to modify the data;

5 means for generating, in response to the one or more instruction, one or more  
6 commands wherein each command is associated with an operation to modify the data;

7 means for placing the commands in a data structure;

8 means for initiating transfer of data from the source to the destination; and

9 means for performing, independent from the means for generating, the operations  
10 associated with the commands contained in the data structure to modify the data as di-  
11 rected by the commands as while the data is being transferred from the source to the des-  
12 tination.

1 23. (Previously Presented) The apparatus as defined in claim 22 comprising:

2 means for acquiring the data from the source.

1 24. (Previously Presented) The apparatus as defined in claim 23 comprising:

2 means for generating a bit mask associated with the acquired data; and

3 transferring the bit mask and the acquired data to the destination.

1 25. (Previously Presented) The apparatus as defined in claim 23 wherein the data struc-

2 ture comprises one or more entries wherein each entry is associated with a command and  
3 the entry contains information associated with a range of addresses and an operation code  
4 that are associated with the command.

1 26. (Previously Presented) The apparatus as defined in claim 25 comprising:

2 means for searching the data structure for an entry containing information associ-  
3 ated with a range of addresses that matches a range of addresses associated with the ac-  
4 quired data;

5 means for determining if the operation code contained in a matching entry indi-  
6 cates a delete data operation; and

means for generating a delete bit mask that represents data that is deleted in the acquired data and transferring the delete bit mask and the acquired data to the destination, if the operation code in the matching entry indicates a delete data operation.

27. (Previously Presented) The apparatus as defined in claim 25 comprising:

means for searching the data structure for an entry containing information associated with a range of addresses that matches a range of addresses associated with the acquired data;

means for determining if the operation code contained in a matching entry indicates an insert data operation; and

means for (i) generating a leading bit mask that represents leading data contained in the acquired data, (ii) transferring the leading bit mask and the acquired data to the destination, (iii) acquiring insert data, (iv) generating an insert data bit mask that represents the insert data, (v) transferring the insert data bit mask and the insert data to the destination, (vi) generating a lagging bit mask that represents lagging data contained in the acquired data, and (vii) transferring the lagging bit mask and the acquired data to the destination, if the operation code indicates an insert data operation.

28. (Currently Amended) A computer readable medium comprising computer executable instructions for execution in a processor for:

reading one or more instructions indicating an operation to modify the data;

generating, in response to the one or more instructions, one or more commands wherein each command is associated with the operation to modify the data;

placing the commands in a data structure;

initiating transfer of data from the source to the destination; and

performing the operations associated with the commands contained in the data structure to modify the data as directed by the commands as-while the data is being transferred from the source to the destination.

1 29. (Previously Presented) The computer readable medium as defined in claim 28 com-  
2 prising computer executable instructions for execution in a processor for:  
3 acquiring the data from the source.

1 30. (Previously Presented) The computer readable medium as defined in claim 29 com-  
2 prising computer executable instructions for execution in a processor for:  
3 generating a bit mask associated with the acquired data; and  
4 transferring the bit mask and the acquired data to the destination.

1 31. (Previously Presented) The computer readable medium as defined in claim 29  
2 wherein the data structure comprises one or more entries wherein each entry is associated  
3 with a command and contains information associated with a range of addresses and an  
4 operation code that are associated with the command.

1 32. (Previously Presented) The computer readable medium as defined in claim 31 com-  
2 prising computer executable instructions for execution in a processor for:  
3 searching the data structure for an entry containing information associated with a  
4 range of addresses that matches a range of addresses associated with the acquired data;  
5 if a matching entry is found, determining if an operation code contained in the  
6 matching entry indicates a delete data operation; and  
7 if so, generating a delete bit mask that represents data that is deleted in the ac-  
8 quired data and transferring the delete bit mask and the acquired data to the destination.

1 33. (Previously Presented) The computer readable medium as defined in claim 31 com-  
2 prising computer executable instructions for execution in a processor for:  
3 searching the data structure for an entry containing information associated with a  
4 range of addresses that matches a range of addresses associated with the acquired data;  
5 if a matching entry is found, determining if an operation code contained in a  
6 matching entry indicates an insert data operation; and if so,



- 7                   a) generating a leading bit mask that represents leading data contained in  
8 the acquired data,  
9                   b) transferring the leading bit mask and the acquired data to the destina-  
10                  tion,  
11                  c) acquiring insert data,  
12                  d) generating an insert data bit mask that represents the insert data,  
13                  e) transferring the insert data bit mask and the insert data to the destina-  
14                  tion,  
15                  f) generating a lagging bit mask that represents lagging data contained in  
16 the acquired data, and  
17                  g) transferring the lagging bit mask and the acquired data to the  
18                  destination.